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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,184	04/09/2004	Rinze Benedictus	8674.006.US0000	8419
77213	7590	11/21/2008		
Novak Druce + Quigg, LLP 1300 Eye Street, NW, Suite 1000 Suite 1000, West Tower Washington, DC 20005			EXAMINER	
			MORILLO, JANELLE COMBS	
			ART UNIT	PAPER NUMBER
			1793	
			MAIL DATE	DELIVERY MODE
			11/21/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/821,184	<b>Applicant(s)</b> BENEDICTUS ET AL.	
	<b>Examiner</b> Janelle Morillo	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,7,8,28-40,49,53-68,98,99 and 101-124 is/are pending in the application.
- 4a) Of the above claim(s) 101-124 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7,8,28-40,49,53-68,98 and 99 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>101608,090908,090408</u> .                                    | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 7, 8, 28-40, 49, 53-68, 98-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakrabarti et al (US 2002/0121319 A1).

Chakrabarti et al teaches aerospace structural components (including wing units see abstract, Fig. 1) such as plate, extrusion, or forging with high strength and fracture toughness and superior SCC resistance [0016] made from Al-Zn-Cu-Mg alloys (abstract). Chakrabarti et al teaches said alloy comprises (in wt%): 6-10% Zn, 1.2-1.9% Mg, 1.2-2.2% Cu, and one or more of: up to 0.4% Zr, up to 0.4% Sc, and up to 0.3% Hf (see [0023]), up to 0.1% Cr, up to 0.3% Mn [0027], which significantly overlaps the presently claimed alloying ranges (cl. 1, 7, 8, 28, 49,) of Cu, Zn, Si, Fe, Zr, and Ti (see table 2 and footnote, see at least Ex. 6 etc.), and is a close approximation of the presently claimed alloying minimum of Mg of 1.92%. Because Chakrabarti teaches a broadly overlapping alloy composition, it is held that Chakrabarti has created a prima facie case of obviousness of the presently claimed invention.

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility.

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Additionally, "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages," *In re Peterson*, 65 USPQ2d at 1379 (CAFC 2003).

A prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of "having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium" as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.).

Concerning claims 7, 8, 28, the alloying ranges taught by Chakrabarti meet the instant limitations (see above).

Concerning property claims 62-68, if the prior art teaches the identical chemical structure (and as processed in substantially identical working and heat treatment tempers as in the instant specification), the properties applicant discloses and/or claims are expected to be present. Additionally, Chakrabarti teaches an EXCO ration of EB or better (therefore EB, EA, or pitting only), see [0123].

Concerning claims 53-61, 64, 99, Chakrabarti teaches said alloy is formed by extrusion or forging (abstract) and formed into a structural component selected from a stringer, wing skin, or upper wing member (cl. 158, 199). Concerning the thickness of said product, Chakrabarti teaches

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a typical thickness of >2 inches (Chakrabarti at cl. 3), or a thin plate member <2 inches thick (Chakrabarti at cl. 11).

Concerning property claims 29, 30, if the prior art teaches the identical chemical structure (and as processed in substantially identical working and heat treatment tempers as in the instant specification), the properties applicant discloses and/or claims are expected to be present. Additionally, Chakrabarti teaches an EXCO ration of EB or better (therefore EB, EA, or pitting only), see [0123].

Concerning claims 31-40 and 98, Chakrabarti teaches said alloy is formed by extrusion or forging (abstract) and formed into a structural component selected from a stringer, wing skin, or upper wing member (cl. 158, 199). Concerning the thickness of said product, Chakrabarti teaches a typical thickness of >2 inches (Chakrabarti at cl. 3), or a thin plate member <2 inches thick (Chakrabarti at cl. 11).

### ***Double Patenting***

3. The Terminal Disclaimers filed 9/9/2008 in view of 10/819,130 and 10/976,154 have been found proper and are hereby recorded.

### ***Response to Amendment/Arguments***

4. In the response filed on September 9, 2008 applicant amended claims 1, 7, 8, 28, 49, 53-56, 58-68, 99, and submitted arguments traversing the rejections of record. The examiner agrees that no new matter has been added.

5. Applicant has amended claim 28 according to examiner's suggestion in the previous office action mailed 9/3/2008.

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6. The examiner requests applicant submit an explanation/statement, in the form of a 1.132 declaration, that the unexpected results exhibited by alloy of the invention examples F (Table 14 of instant specification) and B (Table 9 of instant specification) would be expected to occur over the entire claimed (narrow) alloying ranges (which the examiner agrees is reasonable).

7. As stated previously, the examiner agrees amended transitional phrase “consisting of” overcomes rejections in view of Flidlyander (US 6,726,878) and Shahani (6,027,582) (independent claim 41 contains transitional phrase ‘consisting essentially of’ but does not overlap Cu of Flidlyander’878). Shahani does not teach or suggest the instant Al-Zn alloy complete with the minimum Mn.

8. As stated in the Final Rejection mailed 2/21/2008, applicant has overcome the 102(b) type rejections in view of Chakrabarti, as well as the 103(a) rejections in view of Flidlyander (2004/0101434).

9. Further, the closest prior art to the instant claims is held to be Chakrabarti. Senkov (previously applied to broader claimed ranges) does not teach or suggest the instant Mn range.

***Allowable Subject Matter***

10. The examiner agrees with applicant’s argument that amended claim 1 (previously claim 28) is more commensurate in scope with Ex F and Ex B in the present specification. However, a declaration statement is needed, detailing that the unexpected results exhibited by alloy of the invention examples F and B would be expected to occur over the entire claimed (narrow) alloying ranges (which the examiner agrees is reasonable), see discussion in paragraphs above.

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 7:30 am- 4:00 pm Mon-Wed.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art Unit  
1793

/J. M./  
Examiner, Art Unit 1793  
November 18, 2008